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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/055,959	01/28/2002	Chien-chung Hsiao	HSIA3011/EM	2701

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EXAMINER

NGUYEN, HAU H

ART UNIT PAPER NUMBER

2676

DATE MAILED: 11/07/2003

3

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/055,959

Applicant(s)

HSIAO ET AL.

Examiner

Hau H Nguyen

Art Unit

2676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 6-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Engstrom et al. (U.S. Patent No. 5,850,232).

Referring to claims 6-8, Engstrom et al. teach a method for flipping in a window using overlays begins by creating an overlay flipping structure to represent an overlay. An overlay refers to a pixmap that is superimposed onto a display image during display generation. The overlay flipping structure has a front and back buffer structure that represents regions in video memory. Once the overlay flipping structure is created, an application can draw its display frame to the back buffer of the flipping structure. To make a rendered overlay visible on the display screen, the application flips the front and back buffers. As the application draws a display frame to the back buffer, the overlay control in the display controller reads a rendered overlay from the front buffer (col. 2, lines 27-39). Checking of overlapping windows is illustrated in Figs. 5-7 and column 8, lines 18-29. As shown in Fig. 12A, step 472, Engstrom et al. teach the flip control compares the value for the current scan line with the value of the scan line at the last flip request (472, 474). If the current value is less than the previous value, then the display controller has completed a page flip since the last flip request (assuming the last flip

Art Unit: 2676

containing the maximum Y-coordinate of the primitive). If the current position of the scan line is below the previous position, then the scan line test is inconclusive, and the flip control proceeds with the time check starting at step 468 (col. 22, lines 19-30) (validity test).

*Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art in view of Engstrom et al. (U.S. Patent No. 5,850,232).

Referring to claim 1, as cited in admitted prior art, Applicant illustrates in Fig. 1, a graphic engine includes a command queue 10, a setup engine 11, a scan converter 12, a color calculator 13, a texture pipeline unit 14, a depth test unit 15, a memory controller 16, an alpha blending unit 17, and a display controller 18.

Thus, admitted prior art teaches all the limitations of claim 1, except that setup engine perform the validity test.

However, as cited above, Engstrom et al. teach a method for performing a validity test for checking the back buffer, and writing to the front buffer the primitive if the command passes the validity test. It should be inherent that the back buffer is always checked whether it is full so as to avoid overflow of memory.

Art Unit: 2676

Therefore, it would have been obvious to one skilled in the art to utilize the method as taught by Engstrom et al. in combination with admitted prior art because it enables application programs to flip in a window without disturbing other parts of the display image (col. 2, lines 24-26).

In regard to claims 2 and 4, admitted prior art teaches a setup engine 11 and an external memory controller 16 as shown in Fig. 1. Engstrom et al. teach a validity test as cited above.

Therefore, it would have been obvious to one skilled in the art to utilize the method as taught by Engstrom et al. in combination with admitted prior art because it enables application programs to flip in a window without disturbing other parts of the display image (col. 2, lines 24-26).

Referring to claims 3 and 5, although admitted prior art does not teach comparing the current scan line with the maximum Y-coordinate of the primitive, as cited above, Engstrom et al. teach a validity test wherein, the flip control compares the value for the current scan line with the value of the scan line at the last flip request (472, 474). If the current value is less than the previous value, then the display controller has completed a page flip since the last flip request (assuming the last flip containing the maximum Y-coordinate of the primitive). If the current position of the scan line is below the previous position, then the scan line test is inconclusive, and the flip control proceeds with the time check starting at step 468 (col. 22, lines 19-30).

Therefore, it would have been obvious to one skilled in the art to utilize the method as taught by Engstrom et al. in combination with admitted prior art because it enables application programs to flip in a window without disturbing other parts of the display image (col. 2, lines 24-26).

Art Unit: 2676

*Conclusion*

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892 form.

Brothers, III (U.S. Patent No. 6,128,026) discloses a write blocking accelerator provides maximum concurrency between a central processing unit (CPU) and the accelerator by allowing writes to the front buffer of a dual-buffered system.

Brown (U.S. Patent No. 6,522,335) teaches a method for supplying data to a double buffer process by performing validity test in the front buffer.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hau H. Nguyen whose telephone number is: 703-305-4104. The examiner can normally be reached on MON-FRI from 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on 703-308-6829.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D. C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)


Hand-delivered response should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth floor (Receptionist).

Art Unit: 2676

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

H. Nguyen

10/30/2003

A handwritten signature in black ink, reading "Matthew C. Bella". The signature is fluid and cursive, with the first name "Matthew" being more prominent than the last name "Bella".

MATTHEW C. BELLA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600